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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/662,054	09/15/2000	Randy M. Bonella	10559/350001/P10068	4989

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EXAMINER

BUTLER, DENNIS

ART UNIT PAPER NUMBER

2185

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/662,054

Applicant(s)

BONELLA ET AL.

Examiner

Dennis M. Butler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: _____

1. This action is in response to the application filed on September 15, 2000. Claims 1-45 are pending.
2. The claims have been re-numbered because there were two claims numbered as claim 25. The claims from the second instance of claim 25 through claim 44 have been renumbered as claims 26 through 45 respectively. Applicant must use the new claim numbers in all subsequent communication with the Office.
3. The drawings are objected to because they fail to show all the claimed features such as the non-volatile memory, loading values from the non-volatile memory to the register, the graphics device, and at least one delay element that is a phase locked loop. Correction is required.
4. The specification is objected to because it does not include a Summary of the Invention section as set forth in 37 CFR 1.73. See MPEP 608.
5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-7, 9, 13-14, 19, 22-23, 25-26, 28-33, 35, 37-39 and 41-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Coteus et al., U. S. Patent 6,292,903.

Per claims 1-7, 9, 13-14, 19, 22-23, 25-26, 28-33, 35, 37-39 and 41-45:

Coteus et al teach the claimed items including a data source having a plurality of different lines (Memory Controller 1 and/or DIMMs 14a-14n, Data In lines 104a-n and Data lines 105a-n of figures 2a and 2b), a plurality of programmable delay elements each coupled to one of the lines (Flip-Flops 10a2a-10a2n, Flip-Flops 10a3a-1-a3n and Delays 15a-15n and 16a-16n of figures 2A and 2B and figure 9a), storing values for the programmable delay elements in a register (Memory 3 of figure 1 and Delay Value Info of figure 2b) and testing the signals for the proper delay values (figures 3a-3f) at column 6,

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line 33 – column 8, line 30, at column 24, line 66 – column 25, line 10 and at column 25, line 65 – column 26, line 8.

9. Claims 1-2, 5-7, 13-14, 22-23, 33, 35-38, 41-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Barth et al., U. S. Patent 6,154,821.

Per claims 1-2, 5-7, 13-14, 22-23, 33, 35-38, 41-44:

Barth et al teach the claimed items including a data source having a plurality of different lines, a plurality of programmable delay elements each coupled to one of the lines, storing values for the programmable delay elements in a register and testing the signals for the proper delay values at column 5, lines 14-33 and at column 18, line 6 – column 19, line 60.

10. Claims 1-45 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ohno et al., U. S. Patent 5,646,904.

Ohno et al teach the claimed invention including a data source having a plurality of different lines, a plurality of programmable delay elements each coupled to one of the lines, storing values for the programmable delay elements in a register and testing the signals for the proper delay values as shown in figures 1 and 4 and at column 5, line 32 – column 7, line 7.

11. Claims 3-4, 8-12, 15-21, 24-32, 34, 39-40 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barth et al., U. S. Patent 6,154,821 in view of Coteus et al., U. S. Patent 6,292,903.

Per claims 9, 19, 25-26, 29-30, 39 and 45:

The claims seem to differ from Barth et al in that Barth et al fails to explicitly teach storing delay/levelization values in a non-volatile memory as claimed. Coteus teaches that it is known to store delay/levelization values in a non-volatile memory as described in the above rejection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to store delay/levelization values in a non-volatile memory, as taught by Coteus, in order to store the values permanently for subsequent use in initializing or configuring the memory devices. One of ordinary skill in the art would have been motivated to combine Coteus and Barth because of Coteus suggestion at column 25, line 65 – column 26, line 8. It would have been obvious for one of ordinary skill in the art to combine Coteus and Barth because they are both directed to the problem of testing data lines in order to correctly program a programmable delay devices to compensate for differences in the delay/speed of the individual lines. Claims 3-4, 8, 10-12, 15-18, 20-21, 24, 27-28, 31-32, 34 and 40 recite obvious variations of well known timing and synchronization procedures and circuitry and would have been obvious in view of the teachings and suggestions of Coteus and Barth.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis M. Butler whose telephone number is 703-305-

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9663. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Dennis M. Butler

Dennis M. Butler
Primary Examiner
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